Ovarian Cancer in Virginia

Risk Factors[1]

- Factors associated with increased risk of ovarian cancer include age, overweight/obesity, family history of breast or ovarian cancers, and certain genetic mutations (e.g. BRCA1 and BRCA2 gene mutations).

- Factors associated with decreased risk of ovarian cancer include pregnancy, long-term oral contraceptive use, tubal ligation, and hysterectomy.

Warning Signs and Symptoms[1]

- There are often no symptoms of early stage disease.
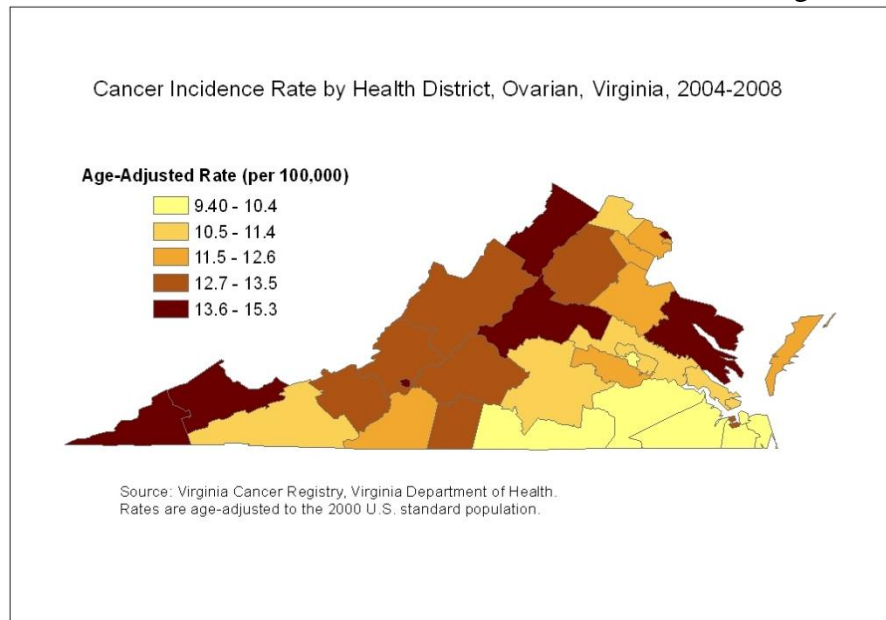- When symptoms occur, they can include abdominal distension, bloating, and increased need to urinate.

Early Detection[1]

- There is no proven screening test for ovarian cancer.
- For high-risk women, a screening approach may be recommended that includes pelvic exam, transvaginal ultrasound, and measuring CA125 level in the blood.

Ovarian Cancer Facts

- Ovarian cancer is the ninth most commonly diagnosed cancer (excluding non-melanoma skin cancer) and the fifth leading cause of cancer death among women in the United States.[1]

- Over the 2004-2008 time period, the incidence rate of ovarian cancer among women in Virginia was 12.0 cases per 100,000.[2] (U.S. rate=12.8 cases per 100,000)[3]
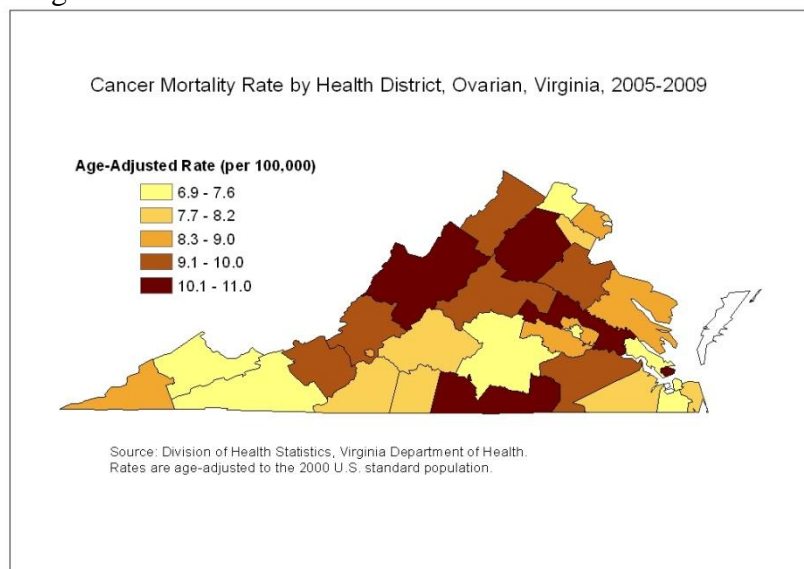
Figure 1

Cancer Incidence Rate by Health District, Ovarian, Virginia, 2004-2008

Age-Adjusted Rate (per 100,000)
- 9.40 - 10.4
- 10.5 - 11.4
- 11.5 - 12.6
- 12.7 - 13.5
- 13.6 - 15.3

Source: Virginia Cancer Registry, Virginia Department of Health.
Rates are age-adjusted to the 2000 U.S. standard population.

Ovarian Cancer in Virginia

- Figure 1 shows incidence rates of ovarian cancer by health district in Virginia. Lenowisco, Roanoke, and Lord Fairfax had the highest incidence rates of ovarian cancer among the 35 health districts.[2]

- Over the 2005-2009 time period, the mortality rate from ovarian cancer among women in Virginia was 8.5 deaths per 100,000.[4] (U.S. rate=8.2 deaths per 100,000)[5]

- Figure 2 shows ovarian cancer mortality rates by health district in Virginia. Hampton, Rappahannock/Rapidan, Central Shenandoah, and Chickahominy had the highest ovarian cancer mortality rates among the 35 health districts.[4]

Figure 2

Cancer Mortality Rate by Health District, Ovarian, Virginia, 2005-2009

Age-Adjusted Rate (per 100,000)
- 6.9 - 7.6
- 7.7 - 8.2
- 8.3 - 9.0
- 9.1 - 10.0
- 10.1 - 11.0

Source: Division of Health Statistics, Virginia Department of Health.
Rates are age-adjusted to the 2000 U.S. standard population.

- In Virginia, incidence rates were higher in white women (12.5 cases per 100,000) compared to African-American women (8.8 cases per 100,000).[2] Ovarian cancer mortality rates were also higher among white women (9.0 deaths per 100,000) compared to African-American women (6.8 deaths per 100,000).[4]

- Ovarian cancer has a five-year relative survival rate of 93 percent if diagnosed in its earliest (local) stage when it is most curable.[1] In Virginia, only 14 percent of ovarian cancer diagnosed was local stage.[2]

- The percentage of ovarian cancer cases diagnosed local stage was similar for both white (14%) and African-American (13%) women in Virginia.[2]

- In Virginia in 2009, there were 551 inpatient hospitalizations for ovarian cancer, at a total cost of over $23 million. The average length of stay was 6.2 days and the average charge per stay was $42,093.[6]

[1] American Cancer Society *Cancer Facts & Figures 2009* (http://www.cancer.org)

[2] Virginia Cancer Registry. Based on combined data from 2004-2008. Rates are age-adjusted to the 2000 U.S. standard population.

[3] Howlader N, Noone AM, Krapcho M, Neyman N, Aminou R, Waldron W, Altekruse SF, Kosary CL, Ruhl J, Tatalovich Z, Cho H, Mariotto A, Eisner MP, Lewis DR, Chen HS, Feuer EJ, Cronin KA, Edwards BK (eds). *SEER Cancer Statistics Review, 1975-2008*, National Cancer Institute. Bethesda, MD, http://seer.cancer.gov/csr/1975_2008/, based on November 2010 SEER data submission, posted to the SEER web site, 2011. Based on combined data from 2004-2008. Rates are age-adjusted to the 2000 U.S. standard population.

[4] VDH Division of Health Statistics. Based on combined data from 2005-2009. Rates are age-adjusted to the 2000 U.S. standard population. Health districts with small mortality numbers are shown in white and not included in quantiles for mortality map.

[5] Xu JQ, Kochanek KD, Murphy SL, Tejada-Vera B. Deaths: Final data for 2007. National vital statistics reports; vol 58 no 19. Hyattsville, MD: National Center for Health Statistics. 2010. Available from:

http://www.cdc.gov/nchs/data/nvsr/nvsr58/nvsr58_19.pdf. National rate is the 2007 age-adjusted rate, which is comparable to the state five-year interval midpoint.

[6] VDH Virginia Health Information Hospital Discharge Patient-Level Dataset.